

What is claimed is:

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1. An edgewise orthodontic bracket comprising:
gingival and occlusal tie wings defining a labially
opening archwire slot therebetween, each of the gingival
and occlusal tie wings having a mesial/distal extent; and,
5 a first set of gingival and occlusal ligating support
means, the gingival ligating support means being disposed
within the mesial/distal extent of said gingival tie wing
and including a sloped portion extending labially toward
the archwire slot, and the occlusal ligating support means
10 being disposed within the mesial/distal extent of said
occlusal tie wing and including a sloped portion extending
labially towards the archwire slot.

2. An edgewise orthodontic bracket as recited in
Claim 1, wherein said gingival ligating support means
further comprises a concave notch extending from a gingival
edge of said gingival tie wing towards said archwire slot,
5 and wherein said occlusal ligating support means further
comprises a concave notch extending from an occlusal edge
of said occlusal tie wing toward said archwire slot.

3. An edgewise orthodontic bracket as recited in
Claim 1, further comprising:
a second set of gingival and occlusal ligating support
means; and,
5 said first set of gingival and occlusal ligating
support means being disposed on a mesial side of said
bracket, and said second set of gingival and occlusal

ligating support means being disposed on a distal side of said bracket.

SubB2 4. An edgewise orthodontic bracket as recited in Claim 3, wherein:

said gingival tie wing further comprises a gingivally-extending center leg portion and gingivally-extending

5 mesial and distal tie wing tip portions;

said occlusal tie wing further comprises an occlusally-extending center leg portion and occlusally-extending mesial and distal tie wing tip portions;

10 wherein gingival edges of said gingival tie wing and occlusal edges of said occlusal tie wing define an elliptical configuration.

5. An edgewise orthodontic bracket as recited in Claim 3, further comprising:

a first set of opposing convex sidewall portions and a first convex floor portion within said archwire slot, 5 wherein said first set of convex sidewall portions and said first convex floor portion are positioned substantially between said gingival and occlusal ligating support means of said first set of ligating support means; and,

10 a second set of opposing convex sidewall portions and a second convex floor portion within said archwire slot, wherein said second set of convex sidewall portions and said second convex floor portion are positioned substantially between said gingival and occlusal ligating support means of said second set of ligating support means.

4 6. An edgewise orthodontic bracket comprising:
gingival and occlusal tie wings positioned in opposing
relation to define a labially opening archwire slot
therebetween;

5 said gingival tie wing having a gingivally-extending
center leg and integral, gingivally-extending mesial and
distal tie wing tip portions;

said occlusal tie wing having an occlusally extending
center leg and integral, occlusally-extending mesial and
10 distal tie wing tip portions; and

a cantilevered, T-shaped hook extending from and
integral with the center leg portion of one of said
gingival and occlusal tie wings.

5 7. 4 An edgewise orthodontic bracket as recited in
Claim 6, said T-shaped hook comprising:

a tapered portion contiguous with said center leg
portion of said one of said gingival and occlusal tie
5 wings;

a neck portion contiguous with said tapered portion;
and,

a head portion contiguous with said neck portion.

6 ~~8~~. An edgewise orthodontic bracket comprising:

first and second opposing tie wings defining a labially opening and mesiodistally-extending archwire slot therebetween, said first tie wing having an outer sidewall extending labially away from a longitudinal center plane of said archwire slot, said second tie wing having an outer sidewall extending substantially parallel to said longitudinal center plane of the archwire slot, wherein a trapezoidal configuration is defined between said outer sidewalls.

7 ~~9~~. A bracket, as claimed in Claim ~~8~~, further comprising:

a base, said first and second tie wings extending upwardly from said base.

8 ~~10~~. A bracket, as claimed in Claim ~~9~~, wherein:

said first and second tie wings are positioned on gingival and occlusal sides, respectively, of said archwire slot;

5 said archwire slot has an archwire engaging bottom portion which is contained within a reference plane; and

said base has gingival and occlusal edges, said base extending generally parallel with said reference plane from said gingival to said occlusal edge.

9 ~~11~~. A bracket, as claimed in Claim ~~10~~, wherein:

said first and second tie wings are positioned on gingival and occlusal sides, respectively, of said archwire slot;

5 said archwire slot has an archwire engaging bottom portion which is contained within a reference plane; and

 said base has gingival and occlusal edges, said base extending generally toward said reference plane from said gingival edge to said occlusal edge.

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~~10~~ 12. A bracket, as claimed in Claim ~~8~~, wherein:

 said first and second tie wings are positioned on gingival and occlusal sides, respectively, of said archwire slot;

5 said archwire slot has an archwire engaging bottom portion which is contained within a reference plane; and

 said base has gingival and occlusal edges, said base extending generally away from said reference plane from said gingival edge to said occlusal edge.

11 ~~13~~. An edgewise orthodontic bracket comprising:
gingival and occlusal tie wings define a labially
opening archwire slot therebetween, said archwire slot
having opposing sidewalls and an adjoining floor;

5 a first convex portion extending labially from said
floor and across said archwire slot; and,

a first auxiliary slot positioned under said convex
portion.

12 ~~14~~. An edgewise orthodontic bracket as recited in
Claim ~~13~~, ¹¹ further comprising:

a second convex portion extending labially from said
floor and across said archwire slot; and,

5 a second auxiliary slot positioned under said second
convex portion;

wherein said first convex portion and said first
auxiliary slot are located on a mesial side of said
bracket, and said second convex portion and said second
10 auxiliary slot are located on a distal side of said
bracket.

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15. An edgewise orthodontic bracket comprising:
gingival and occlusal tie wings defining a labially
opening archwire slot therebetween;

an auxiliary slot extending from an outer sidewall of
5 said gingival tie wing to an outer side of said occlusal
tie wing; and,

an auxiliary device having a shaft portion
positionable within said auxiliary slot;

said auxiliary slot and said shaft portion of said
10 auxiliary device having complimentary configurations
wherein rotational movement therebetween is restricted.

14/13
16. An edgewise orthodontic bracket as recited in
Claim 15, wherein said auxiliary slot comprises adjoining,
flat sidewalls, and wherein said shaft portion of said
auxiliary device comprises complimentary adjoining, flat
5 outer sidewalls.

Sub a3- 17. An orthodontic bracket, comprising:

a base attachable to a tooth;

a body portion attached to said base and having at least one pair of opposing sidewalls; and

5 first and second displaced auxiliary slots, said first and second auxiliary slots each extending from one of said sidewalls to the other of said sidewalls.

23 18. An orthodontic bracket as recited in Claim 17, 22 wherein said first and second auxiliary slots are substantially parallel, said first auxiliary slot being positioned on a mesial side of said bracket, said second 5 auxiliary slot being positioned on a distal side of said bracket.

Sub B- 19. An orthodontic bracket as recited in Claim 17, wherein said body portion comprises gingival and occlusal tie wings defining a labially opening archwire slot therebetween, said archwire slot having a floor and being 5 generally mesially-distally extending.

25 20. An orthodontic bracket as recited in Claim 19, 24 further comprising first and second convex floor portions projecting from said floor of said archwire slot and extending across said archwire slot, said first and second 5 auxiliary slots extending through said first and second convex floor portions, respectively.

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